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Nata

Client:

LumCAT: 1405-N

Luminaire: 92.70.064.00

Report No: NT2018040404

Test No: nata-0100

LampCAT: CITIZEN CLU700

Lamp flux(lm): 378.0

Number of Lamps: 1

Length(mm): 39

Phm Type: C

Voltage(V): 9.7000

Current(A): 0.4100

Power (W): 3.9800

PF: 0.0000

Ballast type: DC

Width(mm): 39

Height(mm): 0

Photometric Results

Lumens(lm): 334.44, Efficiency(%): 88.48% , Luminous Efficacy(lm/W): 84.03

Central intensity(cd): 943.185, Maximum intensity(cd): 943.185

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=21.2

[C90/270]Total=21.2

Field angle(10%Imax): [C0/180]Total=69.0

[C90/270]Total=69.0

IES Classification : TypeI

Longitudinal Classification : VeryShort

Cut Off Classification : FullCutoff

Max Cd(At 90°Vert) : 1.273179

Max Cd(80 to 90°Vert) : 2.71841

Street Side UpWard Lumens: - -of Lamp 0.00%of Luminaire

Street Side DownWard Lumens: 44.94%of Lamp 50.00%of Luminaire

House Side UpWard Lumens: - -of lamp 0.00%of Luminaire

House Side DownWard Lumens: 44.94%of Lamp 50.00%of Luminaire

SLI: 8.629 (C Flash Area: 0.000)

Throw: 91.5 (long), Spread: 2.9 (narrow), Control: 8.629 (tight)

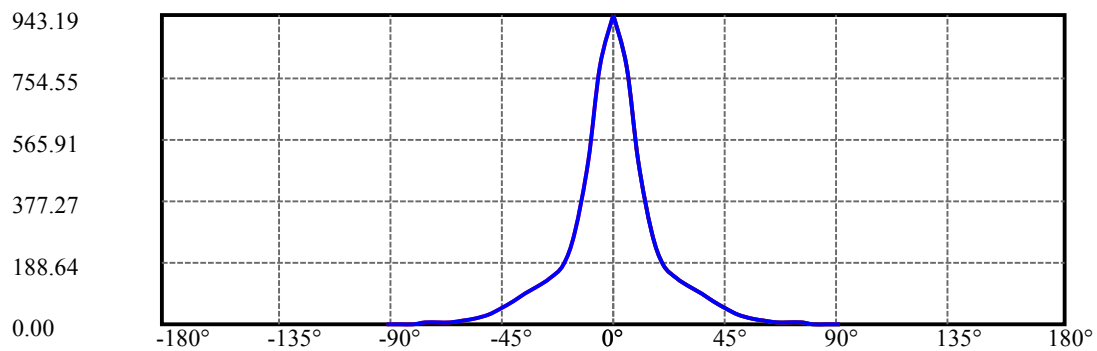
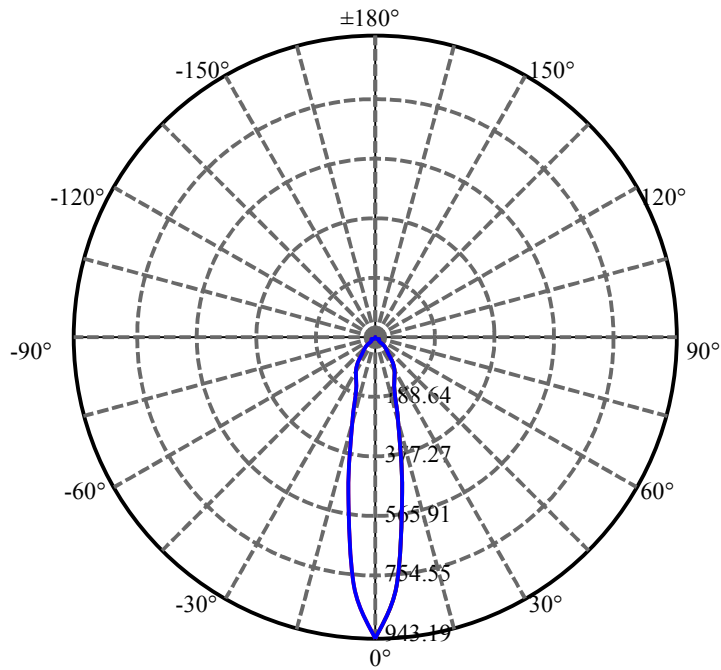
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	943.185	5.640	5.64	1.492%	1.687%
5.0	782.290	37.373	43.013	9.887%	12.861%
10.0	495.576	47.170	90.183	12.479%	26.966%
15.0	279.542	39.658	129.842	10.492%	38.824%
20.0	182.085	34.136	163.978	9.031%	49.031%
25.0	139.396	32.291	196.269	8.543%	58.686%
30.0	115.460	31.644	227.913	8.371%	68.148%
35.0	92.068	28.946	256.859	7.658%	76.803%
40.0	68.311	24.068	280.928	6.367%	84.000%
45.0	44.623	17.296	298.224	4.576%	89.171%
50.0	27.170	11.409	309.632	3.018%	92.582%
55.0	16.655	7.478	317.11	1.978%	94.818%
60.0	11.472	5.446	322.556	1.441%	96.447%
65.0	8.052	4.000	326.556	1.058%	97.643%
70.0	5.802	2.988	329.545	.791%	98.536%
75.0	4.040	2.139	331.684	.566%	99.176%
80.0	2.718	1.467	333.151	.388%	99.615%
85.0	1.721	0.939	334.09	.249%	99.896%
90.0	1.273	0.349	334.439	.092%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	227.91	60.29%	68.15%
0-40	280.93	74.32%	84.00%
0-60	322.56	85.33%	96.45%
0-90	334.09	88.38%	99.90%
0-120	334.09	88.38%	99.90%
0-180	334.44	88.48%	100.00%
60-90	16.98	4.49%	5.08%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-37.22	267.55	70.78%	80.00%

ZONAL LUMEN SUMMARY

0-10	90.18
10-20	73.79
20-30	63.94
30-40	53.01
40-50	28.70
50-60	12.92
60-70	6.99
70-80	3.61
80-90	0.94
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



C0(Max): —————

C0/C180: —————

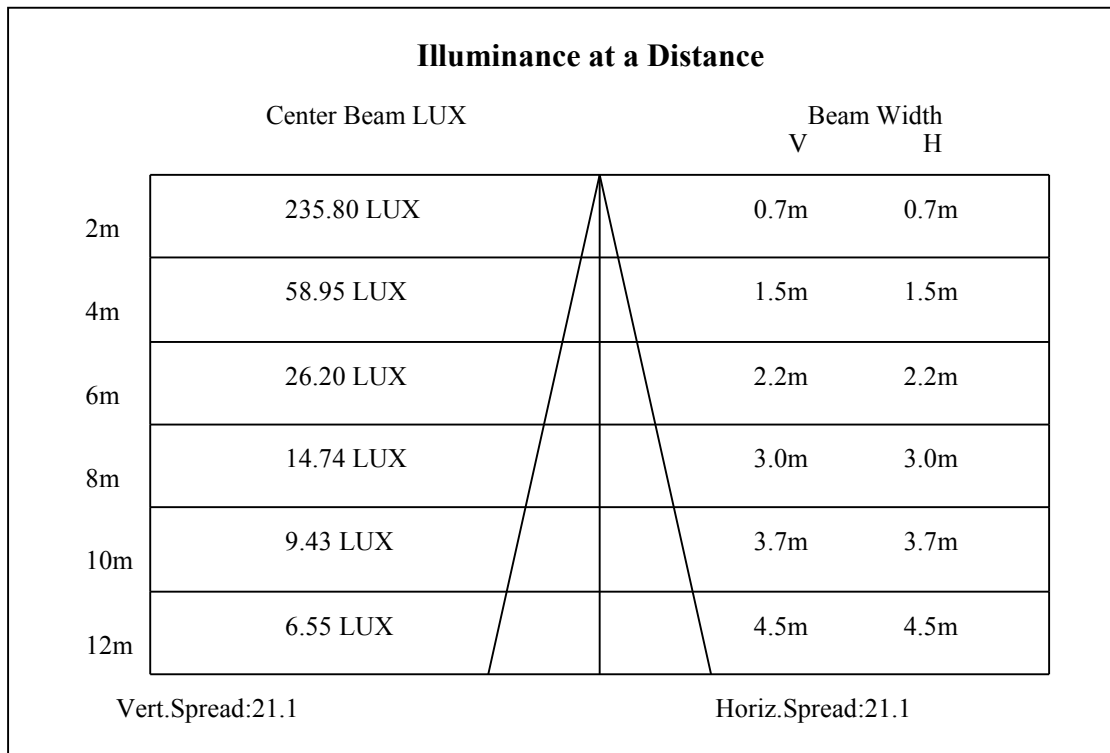
C90/C270: —————

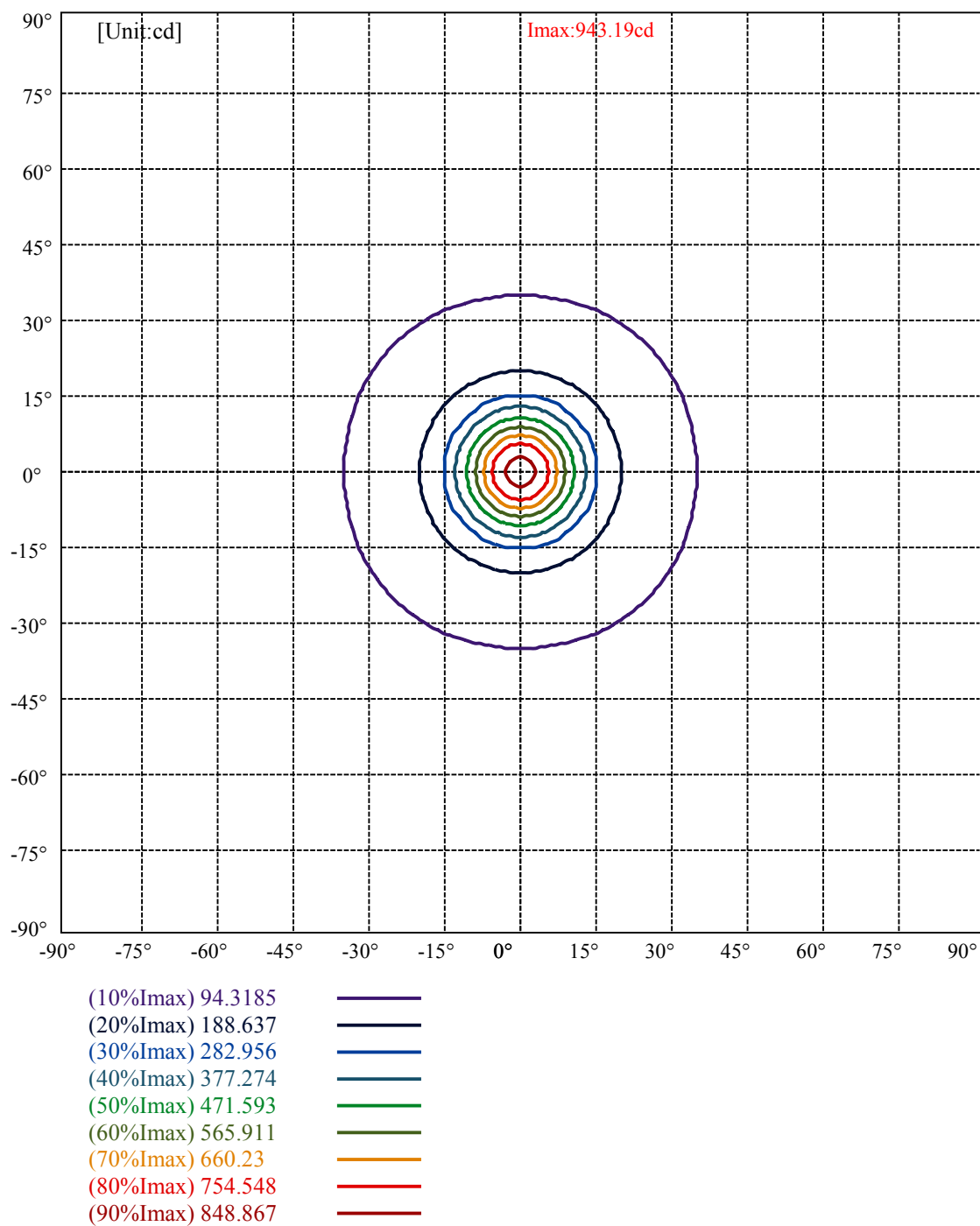
Field angle(10%Imax):C0/180Left:34.5 Right:34.5

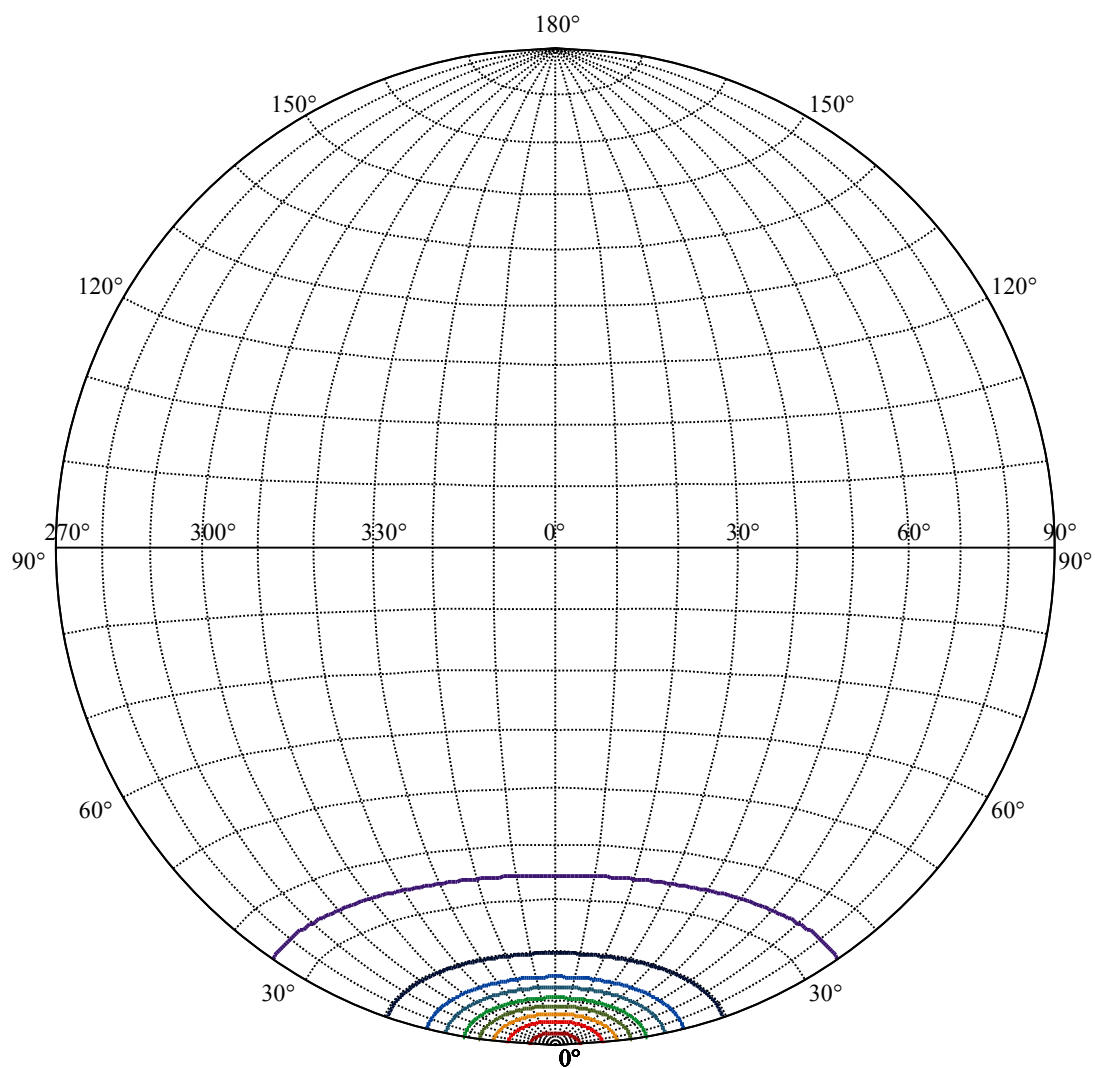
:C90/270Left:34.5 Right:34.5

Beam Angle(50%Imax):C0/180Left:10.6 Right:10.6

:C90/270Left:10.6 Right:10.6







House

[Unit:cd]

Road

Imax:943.19

(10%Imax) 94.3185

(20%Imax) 188.637

(30%Imax) 282.956

(40%Imax) 377.274

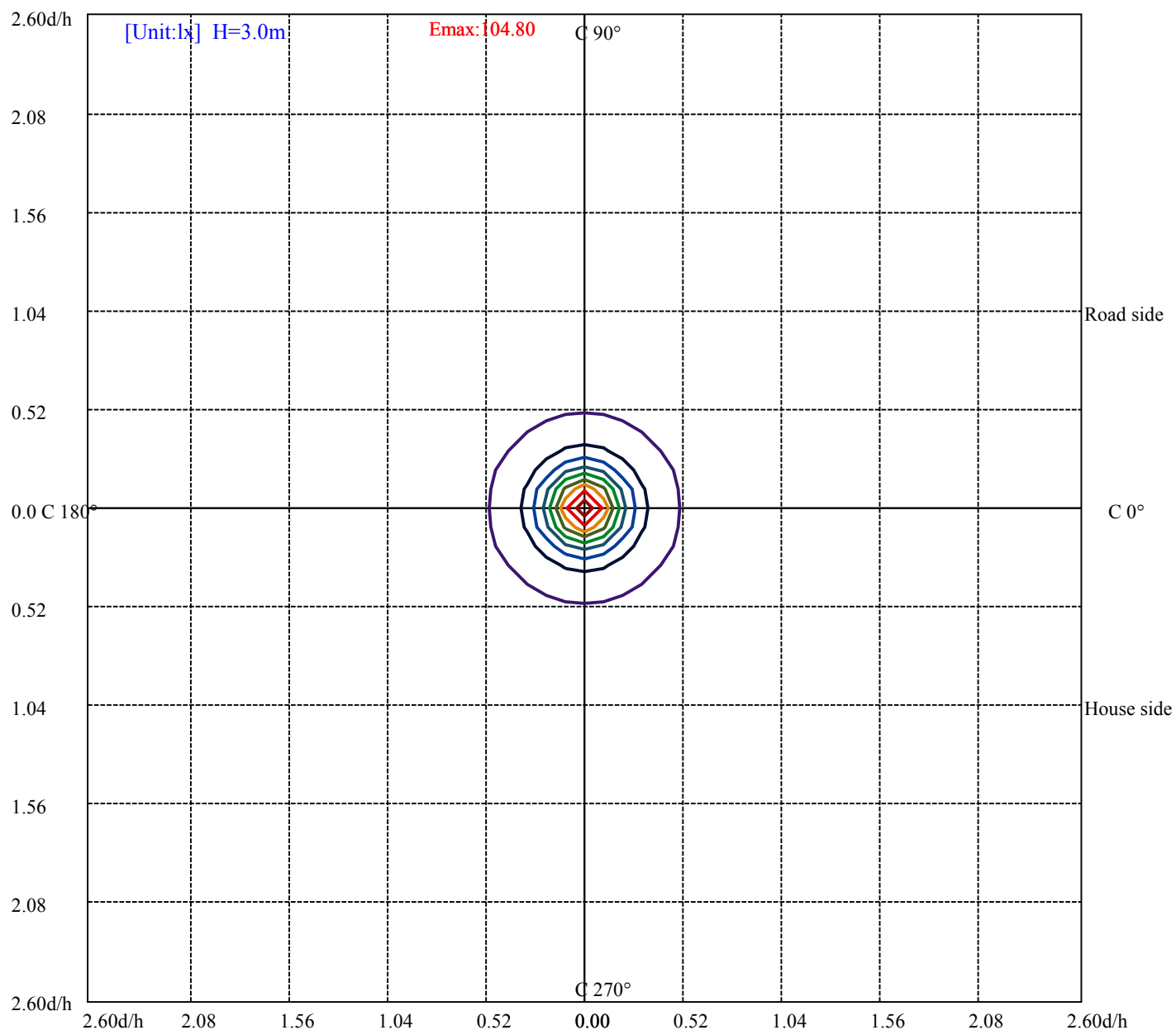
(50%Imax) 471.593

(60%Imax) 565.911

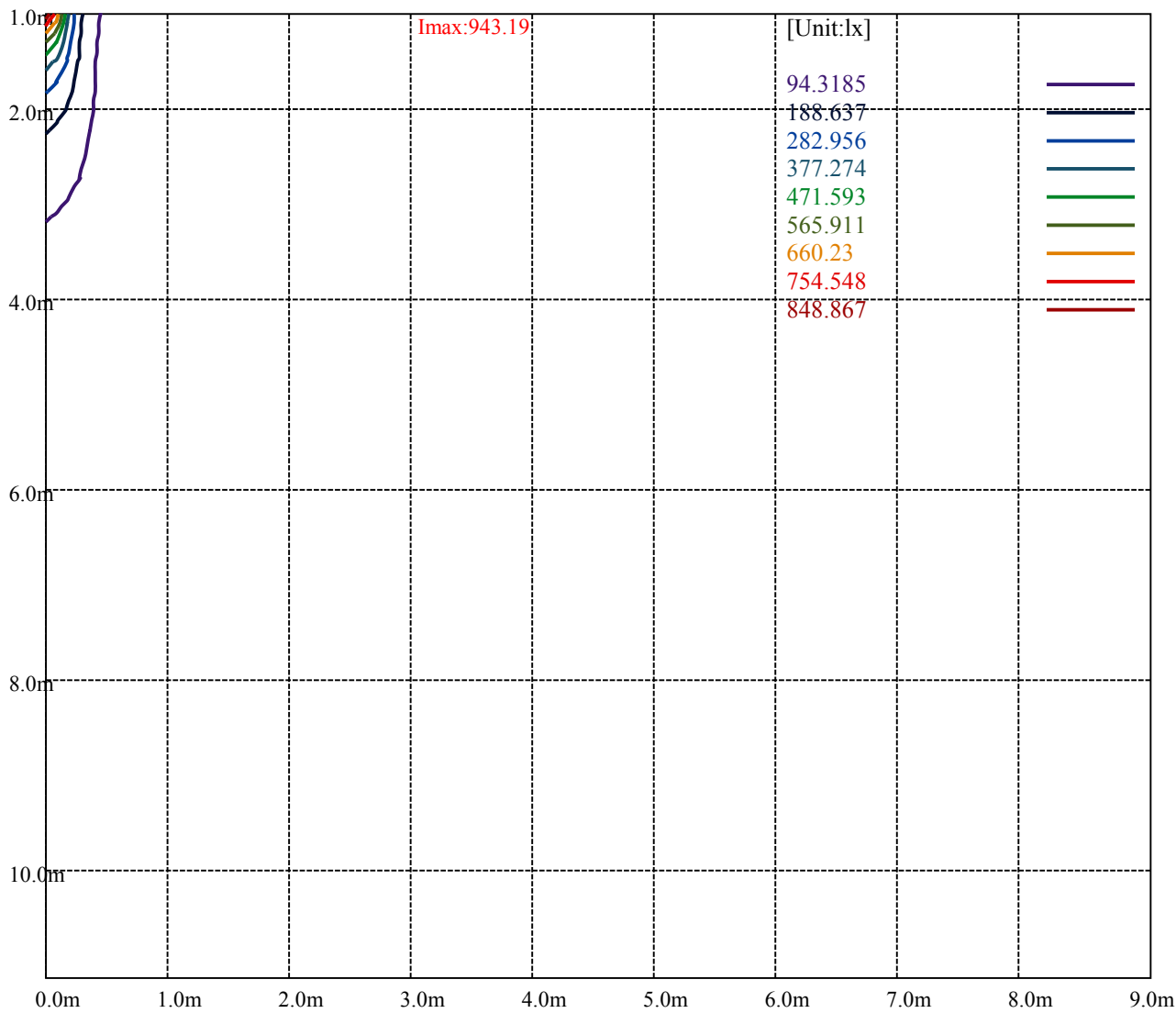
(70%Imax) 660.23

(80%Imax) 754.548

(90%Imax) 848.867



(10%Emax) 10.47978	—
(20%Emax) 20.95956	—
(30%Emax) 31.43933	—
(40%Emax) 41.91911	—
(50%Emax) 52.39889	—
(60%Emax) 62.87867	—
(70%Emax) 73.35844	—
(80%Emax) 83.83823	—
(90%Emax) 94.318	—



Luminance Table

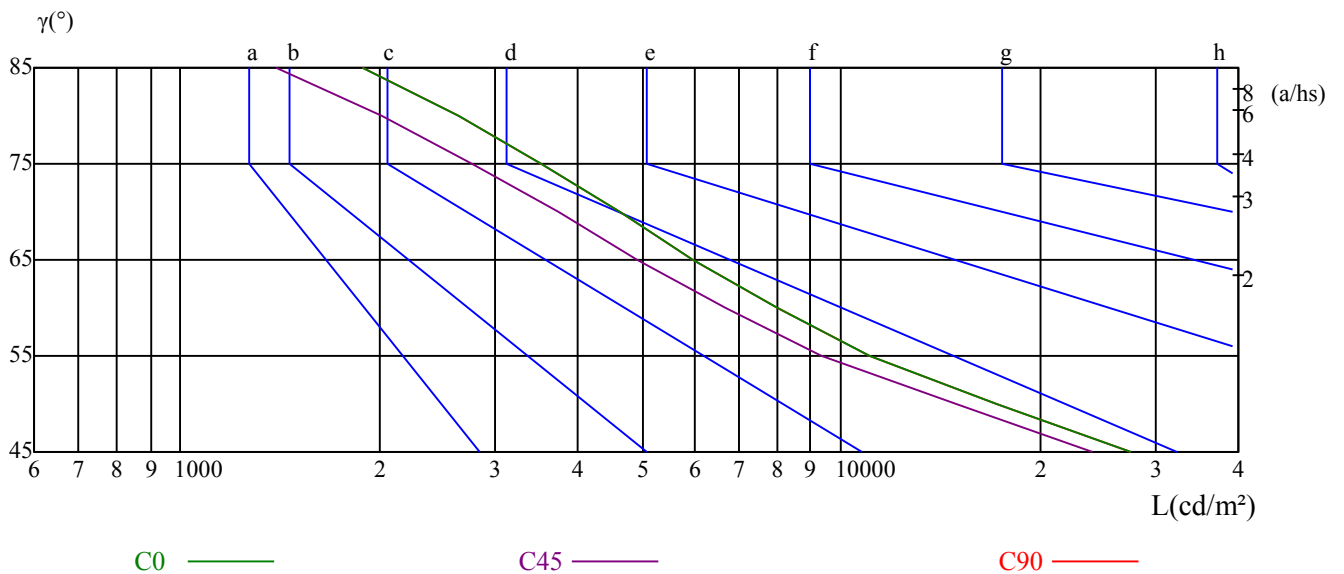
γ	45	50	55	60	65	70	75	80	85
C0	27426	17249	11020	7989	5966	4630	3522	2633	1892
C45	24049	14907	9378	6686	4902	3727	2769	2013	1397
C90	27426	17249	11020	7989	5966	4630	3522	2633	1892

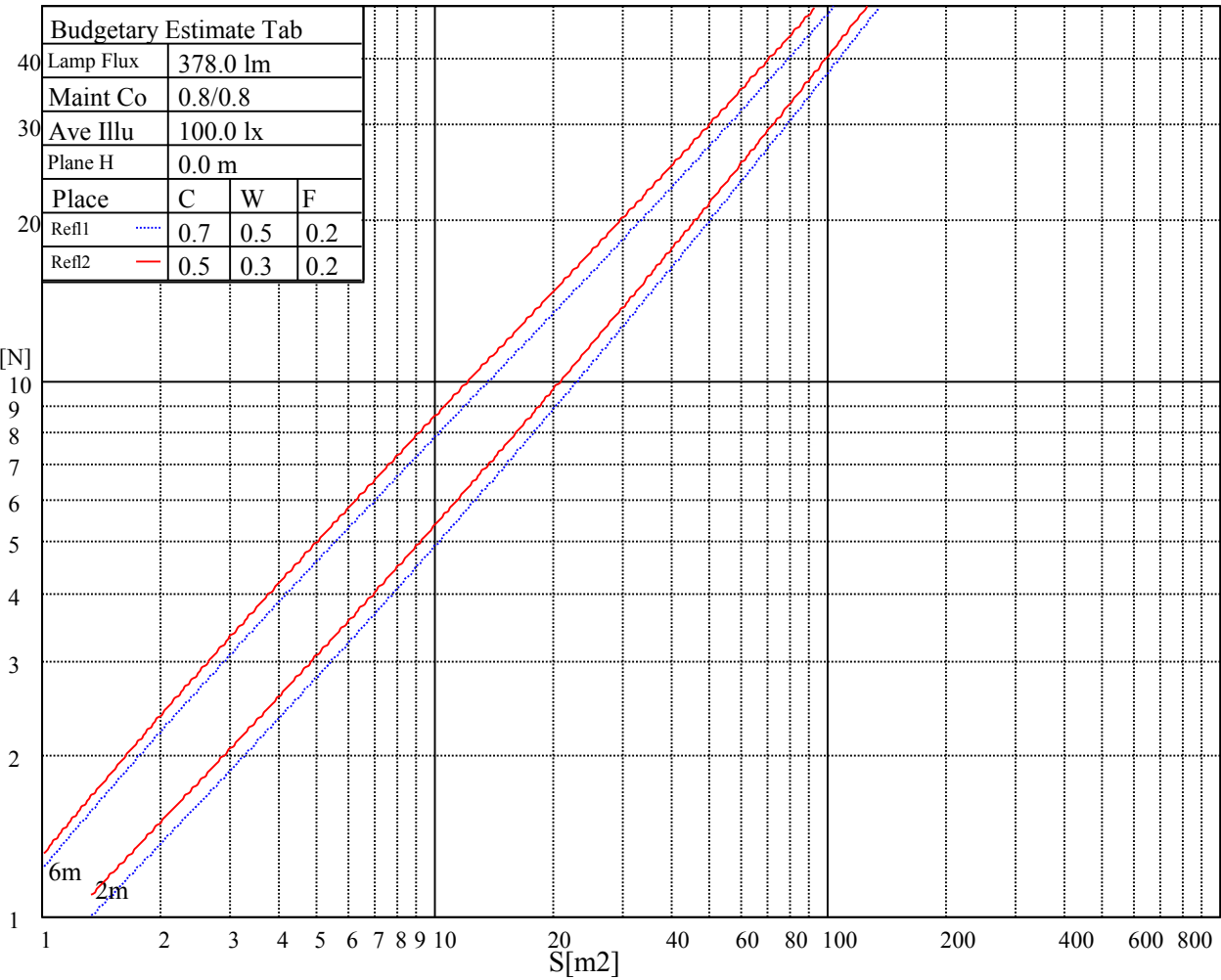
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
12526	12526	12526	10262	10262	10262	12979	12979	12979

Glare Table

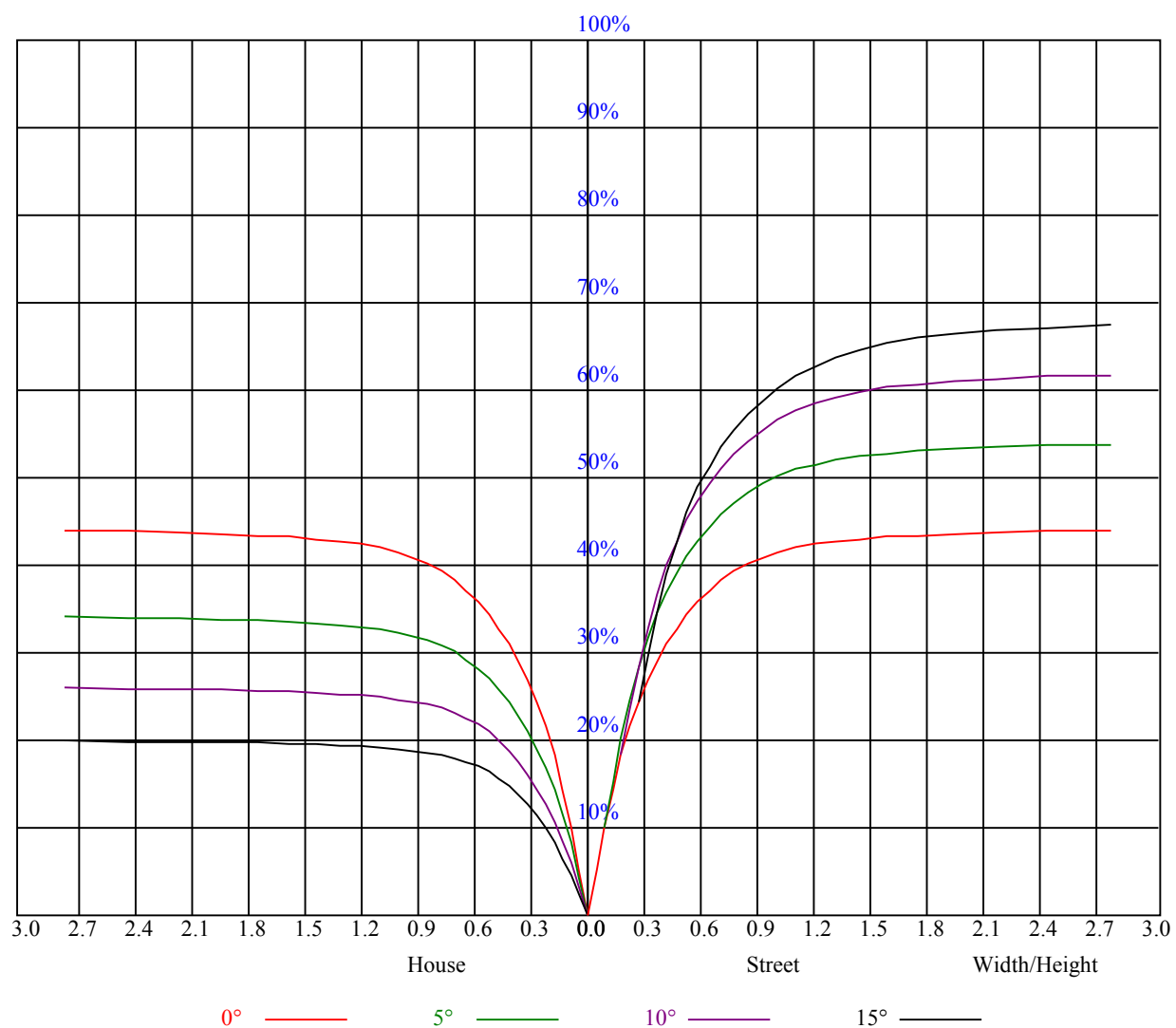
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

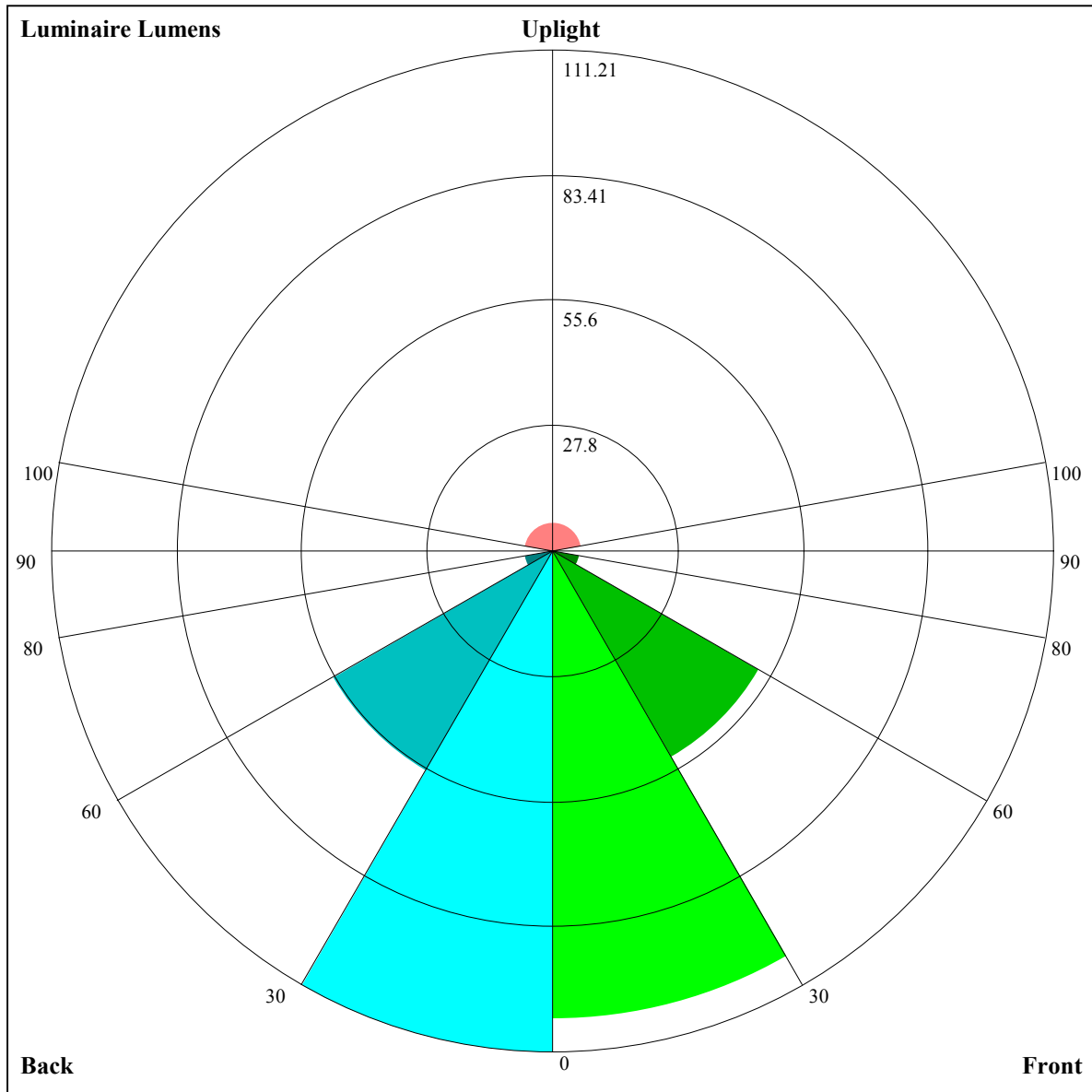
Luminance Limiting Curve





RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.07	1.07	1.07	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	0.97	0.95	0.92	0.95	0.93	0.91	0.92	0.90	0.88	0.88	0.87	0.85	0.85	0.84	0.83	0.81
2	0.90	0.86	0.83	0.89	0.85	0.82	0.86	0.83	0.80	0.83	0.81	0.78	0.81	0.79	0.77	0.75
3	0.84	0.80	0.76	0.83	0.79	0.75	0.81	0.77	0.74	0.79	0.75	0.73	0.76	0.74	0.72	0.70
4	0.79	0.74	0.70	0.78	0.73	0.69	0.76	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.67	0.66
5	0.74	0.69	0.65	0.74	0.69	0.65	0.72	0.68	0.64	0.71	0.67	0.64	0.69	0.66	0.63	0.62
6	0.70	0.65	0.61	0.70	0.65	0.61	0.68	0.64	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.58
7	0.67	0.61	0.58	0.66	0.61	0.58	0.65	0.61	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.55
8	0.64	0.58	0.55	0.63	0.58	0.55	0.62	0.58	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.53
9	0.61	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.51	0.50
10	0.58	0.53	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.52	0.49	0.56	0.52	0.49	0.48





Luminaire Lumens:

FL=103.8,FM=52.7,FH=6.13,FVH=0.98

BL=111.21,BM=56.35,BH=6.5,BVH=1.06

UL=1.39,UH=6.61

BUG Rating:B1-U1-G0

Nata 1405-N

Intensity data(cd)										Appendix Page: 15 Total:15	
C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	943.34	710.83	422.06	248.25	167.81	134.39	110.06	87.15	64.09		
45.0	958.81	678.85	383.58	229.75	161.98	127.51	107.25	80.66	55.61		
90.0	922.80	594.50	360.12	215.16	156.80	127.62	105.76	80.49	56.05		
135.0	947.80	756.92	465.56	250.84	170.78	132.52	111.60	89.25	64.86		
180.0	943.34	815.83	509.77	272.69	175.96	133.40	113.64	93.38	70.64		
225.0	958.81	949.01	639.31	336.39	206.19	152.89	124.65	102.96	82.36		
270.0	922.80	975.65	693.49	408.30	232.01	162.25	131.09	106.86	83.52		
315.0	947.80	776.74	490.72	274.95	185.15	144.58	119.64	95.80	69.37		
360.0	943.34	710.83	422.06	248.25	167.81	134.39	110.06	87.15	64.09		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	40.69	25.11	15.69	10.96	7.71	5.56	3.96	2.53	1.54		
45.0	33.53	21.09	13.43	9.52	6.94	5.01	3.36	2.26	1.38		
90.0	33.97	20.98	12.94	9.36	6.55	4.73	3.25	2.09	1.38		
135.0	41.07	24.45	15.14	10.85	7.49	5.45	3.80	2.53	1.54		
180.0	45.31	26.81	16.52	11.78	8.26	6.06	4.13	2.81	1.82		
225.0	56.27	34.96	21.31	13.60	9.47	6.66	4.73	3.30	2.20		
270.0	60.07	36.17	20.98	13.71	9.63	6.94	4.84	3.47	2.15		
315.0	46.08	27.80	17.23	12.00	8.37	6.00	4.24	2.75	1.76		
360.0	40.69	25.11	15.69	10.96	7.71	5.56	3.96	2.53	1.54		
C/ γ (°)	90.0										
0.0	1.21										
45.0	1.21										
90.0	1.27										
135.0	1.21										
180.0	1.21										
225.0	1.43										
270.0	1.38										
315.0	1.27										
360.0	1.21										